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V. *An Inquiry into the Genus of the Tree called by Pona Abelicea cretica.* By James Edward Smith, M.D. F.R.S. P.L.S.

Read March 18, 1806.

**BOTANISTS** in investigating the tropical climates, have found there a copious harvest of arborescent plants, whose profusion, splendour and importance have, in a great measure, diverted their attention from the more diminutive and less ostentatious tribes of vegetables. On the other hand those situated in less luxuriant regions, have, in bending the chief part of their attention to the minute and intricate plants of such countries, too often slighted the apparently few and easy ones which were presumed to require little scientific examination. Hence we have been made acquainted with but a small part of the mosses, lichens, or other unornamental plants of hot countries, while the trees of cold ones have experienced a similar kind of neglect. I speak, however, in general terms only; for the curious and ample discoveries of a Swartz and a Menzies afford an exception to the former part of my position, as the labours of an Ehrhart do to the latter. Some allowance indeed is to be made for the difficulties of studying the species of *Populus*, *Salix*, *Betula*, *Ulmus*, &c. arising from the different seasons of their flowering and leafing, as well as their sexual differences. On the same ground I would apologize for those naturalists who have, since the days of Pona and Clusius, visited Crete without taking any notice of their *Abelicea*, or Bastard Sandal-wood, a tree which

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though in some degree an object of commerce, seems, as far as we know, peculiar to that island, and which no systematic author, that I can find, has noticed. Those great compilers and observers, Adanson and Lamarck, have passed it over in silence.

I shall first collect the slight memorials of this tree which already exist, and then add what I have been able to ascertain concerning it.

The earliest and most original account of the *Abelicea* is found in Clusius's *Historia Plantarum*, part 2, p. 302, in a letter to that great botanist from Honorio Belli, dated Crete, October 1st, 1594, and this it is worth while to translate.

“ *Abelicea*, seeds of which I now send, is a large upright tree,  
 “ with abundance of branches, and of a handsome appearance.  
 “ Its leaves are like those of the *Alaternus*, but rounder and  
 “ deeply serrated. With the flowers I am unacquainted. The  
 “ fruit is the size of pepper, almost round, its colour between  
 “ green and black. The wood is hard, with a slight degree of  
 “ fragrance, insomuch that its saw-dust resembles that of san-  
 “ dal wood, and it might properly be denominated Bastard San-  
 “ dal-wood of Crete. This tree grows only on the highest sum-  
 “ mits of the white mountains, and is used for making beams.  
 “ I believe it to have been unknown to the antients, unless it  
 “ may be the Mountain Elm of Theophrastus, described in his  
 “ 3d book, chap. 14, but the leaves are neither slightly serrated,  
 “ nor so large as those of a pear; on the contrary they are much  
 “ smaller. It is called *ἀπελικέα*.”

Pona, in the Italian edition of his Description of Mount Bal-  
 dus, published in 1617 at Venice, p. 112, gives a wooden cut of  
 the branches and leaves of the tree in question, which figure he  
 received from Honorio Belli. A description is annexed, very  
 nearly agreeing word for word with the above, but certainly not

copied

copied from the publication of Clusius, for the following passages are interspersed—that “he hopes another year to send Pona the flowers,” that “the fruit as above described was unripe,” and that “the wood is red.” The particular place of growth, and the reference to Theophrastus are omitted, but Pona subjoins the following information.

“The trunks of this tree have been, within a short time, brought to Italy, and bought by some persons, who sold them for Sandal-wood. It differs, however, from the genuine wood of that name, especially in being less heavy.”

From these writers the *Abelicea* found its way into Bauhin's *Pinax*, p. 393, by the name of *Pseudosantalum Creticum*, but without any new observation. The account of it, extracted from Clusius, occurs also in J. Bauhin's *Historia Plantarum*, v. i. 490, without a figure, or any reference to Pona. In Ray's *Historia Plantarum*, v. ii. 1805, we find merely a transcript of J. Bauhin, with a reference to Parkinson, whose book I have not at hand, but it can scarcely contain any further information on this subject.

On turning to Theophrastus I find no reason to consider it as his ὄρειπτελέα or Mountain Elm, for the only characters given of that tree, and which are quoted by Belli in the above extract, serve to prove them perfectly different plants.

In Tournefort's herbarium specimens of the *Abelicea*, with a reference to John Bauhin, are preserved, but I can find no mention of it either in his *Voyage*, his *Institutiones*, or his *Corollarium*. He probably gathered it in Crete, but did not observe the fructification.

Specimens gathered, either by that great French botanist or others of his time, are to be found in various collections. One of them was sent by Schreber to Linnæus, without fructification, marked

with C. Bauhin's synonym. This Linnæus never ventured to describe. He had received from some other quarter an equally imperfect specimen of the tree named in the *Hortus Kewensis*, *Ulmus nemoralis*, which bears at least a generic resemblance in habit to the *Abelicea*, but the leaves are twice as large, and not downy (except near the nerves) beneath. These two specimens Linnæus pinned together, and wrote on the last-mentioned *ABCdaria*, laying them both into the genus *Quercus*. Whether this arose from the slight resemblance between the names *Abelicea* and *ABCdaria* I will not venture to guess, but the latter denomination, used by Rumphius only, belongs to a *Verbesina*, and has no proper connection with the plants of which I am speaking.

The union of these two specimens in the Linnean herbarium first led me to suspect the *Abelicea* might be an *Ulmus*, or at least next akin to that genus. Specimens of the *Ulmus nemoralis*, in flower and fruit, were given to the younger Linnæus at Paris, by the name of *Ulmus polygama*, and I think there can be no doubt of its being what Pallas has described and figured under the denomination of *Rhamnus carpinifolius*, *Fl. Ross. v. i. t. 60*, though he justly doubted whether he were right as to the genus. The fruit, indeed, in the imperfect state in which Pallas as well as Linnæus had it, is not much like an *Ulmus*, but it bears less resemblance to a *Rhamnus*.

In Dr. Sibthorp's herbarium I find specimens of the *Abelicea*, gathered by him probably in Crete, though no mark is annexed to them, nor do I discover any mention of the *Abelicea* among his papers. These specimens, however, are valuable for being in fruit, and they agree in that part with the supposed *Ulmus* above mentioned. On these grounds I have ventured to admit the tree in question into my *Prodromus Floræ Græcæ* by the name

of *Ulmus? Abelicea*, hoping to excite others, whenever they may have an opportunity, to examine its living fructification, as well as that of the *Ulmus nemoralis*. By this means their genus, which is certainly one and the same, though perhaps different from *Ulmus*, but which I am obliged to leave in doubt, will be ascertained. It is thus that botanists should co-operate to bring their "lovely science" to perfection. Linnæus and other great masters have necessarily left many things imperfect and in doubt, particularly with regard to genera. These I have uniformly lent my aid, whatever it may be, to elucidate from time to time, particularly such as concern the Flora of Britain, being, if I mistake not, the first writer among us who undertook to examine them, and who did not implicitly copy Linnæus as a matter of course. I am now pursuing the same plan in the Greek Flora. Much must be left for following observers, and I have always preferred leaving things as they are, to any hasty or rash alteration. Several have taken up the same subject; none with more zeal than Mr. Salisbury, and I trust he will pursue it so as to render service to the science. The world is now in expectation of a learned essay on this subject from his pen.

J. E. SMITH.

Norwich, March 15, 1806.